METHOD OF ACCESSING AN INTERACTIVE TELEVISION SESSION BY MEANS OF A MINI-MESSAGE

[0001] The invention relates to the field of interactive television.

[0002] The invention relates more specifically to a method that aims to allow access to an interactive television service by previously entering a code sent by mini-message, which can be, for example, in SMS format.

[0003] There are known solutions for accessing interactive pay television services in the previous state of the art. A classic solution consists of making the payment using a bank card. Other solutions are also known, such as payment by means of a surcharged modem connection.

[0004] The invention intends to solve the disadvantages of the previous state of the art by providing a method that enables access to an interactive pay television service by means of a mini-message.

[0005] For this purpose, the invention relates, in its most general sense, to a method of accessing an interactive television service by means of a code and a mini-message, characterised in that it comprises the following steps:

- random generation of a code C1 by an interactive television application implemented on an interactive television set;
- sending of a mini-message containing the code C1 to a processing server by means of a mobile telecommunications device;
- calculation of the code C2 = F(C1) by the processing server;
- resending of the code C2 by the processing server and receipt of the code C2 on the mobile telecommunications device;
- entry of C2 by the user in the interactive television application;

- calculation by the interactive application of C1' = F^{-1}(C2), checking that C1' = C1, and enabling the user to access said service;

where F is a predefined function, and F^{-1} is the inverse function of F.

[0006] According to a first variant, said mini-message is in SMS format.

[0007] According to a second variant, said mini-message is in MMS format.

[0008] According to a third variant, said mini-message is in the form of an e-mail.

[0009] According to an embodiment of the invention, said mini-message is transmitted across a mobile telecommunications network.

[0010] According to another embodiment of the invention, said mini-message is transmitted across the internet and/or a local wireless network.

[0011] Preferably, said service requires payment and said mini-message is surcharged.

[0012] The invention further relates to a system for implementing the method, comprising at least a mobile telecommunications device, an interactive television set, a mobile telecommunications network or a local wireless network, a digital television broadcasting network and a processing server.

[0013] The invention will be understood better from reading the description, provided below for purely explanatory purposes, of an embodiment of the invention, in reference to the appended figures, in which:

- figure 1 shows an embodiment of the method according to the invention.

[0014] In the embodiment of the invention shown in our example, a user has a television set connected to an interactive television decoder and a mobile telephone terminal that has capacity for sending and receiving SMS, MMS or e-mail messages. This terminal can be compatible with GSM, CDMA, GPRS, UMTS or any other digital telecommunications standard that supports

sending and receiving mini-messages. It is also possible to use a PDA terminal (personal digital assistant) connected to a local wireless network (Wi-Fi, etc.). It is understood that this example is non-exhaustive and that it is up to the person skilled in the trade to implement variations that adapt to each specific case.

[0015] The user is watching free-access interactive television programmes. At a given instant T, he/she decides to access an interactive pay television service. The interactive television application implementing the method according to the invention generates a code C at random and asks the user to enter this code C on his/her mobile terminal.

[0016] In our example, the code is taken from the natural numbers under $2^8 = 256$ and the function used is $Y = F(X) = 1/x^2$. This means that $X = F^{-1}(Y) = 1/\sqrt{(Y)}$.

[0017] The user then enters the code $C = N_1$ on his/her terminal and sends it in the form of an SMS message to a predefined number. In our example, the SMS is surcharged, in other words, the mobile telecommunications operator bills the message at a higher price than normal SMS messages and a part of this extra charge is paid back to the interactive pay television service provider.

[0018] Next, the SMS is received by a processing server, which calculates $R = F(N_1) = 1/(N_1)^2$. The server sends the result R back to the user's terminal over a mobile telecommunications network.

[0019] The next step consists of the user entering R in a window of the interactive television application using his/her remote control. The interactive application calculates $F^{-1}(R) = 1/\sqrt{(R)}$ and checks that this value is the same, by approximation of calculations on real numbers by nearby computers, as N_1. If the verification is successful, the interactive television application authorises the user to access the paying service.

[0020] The invention is described above as an example. It is understood that people skilled in the trade will be able to implement different variants of the invention without therefore departing from the context of the patent.